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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,453	07/21/2003	Soo Won Park	9988.039.00-US	5244

7590

12/29/2004

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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/622,453

Applicant(s)

PARK, SOO WON

Examiner

Stephen Gravini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,141,887) in view of Deschaaf et al. (US 4,385,452). Chen is considered to disclose the claimed invention comprising:

a bulkhead **30** having an air outlet opening that exhausts humidified air from the drum;

an electrically non-conductive sensor body **148** secured directly to the front bulkhead, the sensor body being positioned so as to cover a portion of the air outlet opening. Chen is considered to disclose the claimed invention, except for the claimed feature including at least one sensing element disposed on a first surface of the sensor body, the at least one sensing element being exposed to inside of the drum so as to make contact with the wet clothes. Deschaaf, another dryer sensor assembly, is considered to disclose that feature at column 5 line 61 through column 6 line 18 and as shown in figure 5. It would have been obvious to one skilled in the art to combine the teachings of Chen with a feature including at least one sensing element disposed on a first surface of the sensor body, the at least one sensing element being exposed to inside of the drum so as to make contact with the wet clothes, considered to be disclosed in secondary reference Deschaaf for the purpose of more accurately sensing the moisture of clothes being dried within a clothes dryer by contacting the clothes

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instead of sensing the moisture of the air flowing past the clothes. Furthermore Chen in view of Deschaaf is considered to disclose the claimed invention, as discussed above, under the obviousness rejection, except for the claimed screw holes, detent, caved channel, ridge included groove, and sloping surface. It would have been an obvious matter of design choice to provide the claimed fastening means or adjoining surface shapes for the purpose of securing a moisture sensor to a clothes dryer for a more contoured profile.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Deschaaf in further view of Jelinek et al. (US 5,940,986). Chen in view of Deschaaf is considered to disclose the claimed invention, as discussed under the obviousness rejection above, except for the claimed sensor body includes an extension member extended from a second surface of the sensor body and a first mounting bracket having an aperture provided thereon is extended from the front bulkhead, the extension member being inserted into the aperture for slip fit engagement with the first mounting bracket. Jelinek, another dryer sensor assembly, is considered to disclose a sensor body includes an extension member extended from a second surface of the sensor body and a first mounting bracket having an aperture provided thereon is extended from the front bulkhead, the extension member being inserted into the aperture for slip fit engagement with the first mounting bracket at column 3 lines 41-58. It would have been an obvious to one skilled in the art to combine the teachings of Chen in view Deschaaf with the considered teachings found in Jelinek for the purpose of fitting a sensor in an engaged position within the structure of a clothes dryer.

Claims 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 6,141,887) in view of Deschaaf et al. (US 4,385,452) in further view of Jelinek et al. (US 5,940,986). Chen is considered to disclose the claimed invention comprising:

- a cabinet **10**;

- a drum **26** rotatably provided in the cabinet for containing a load of wet clothes to be dried;

- a rear bulkhead **34** comprising an air inlet opening that exhausts dry air into the drum;

- a front bulkhead **30** comprising an air outlet opening that exhausts humidified air from the drum;

- an electrically non-conductive sensor body **148** secured directly to the front bulkhead, the sensor body being positioned so as to cover a portion of the air outlet opening. Chen is considered to disclose the claimed invention, except for the claimed feature including at least one sensing element disposed on a first surface of the sensor body, the at least one sensing element being exposed to inside of the drum so as to make contact with the wet clothes. Deschaaf, another dryer sensor assembly, is considered to disclose that feature at column 5 line 61 through column 6 line 18 and as shown in figure 5. It would have been obvious to one skilled in the art to combine the teachings of Chen with a feature including at least one sensing element disposed on a first surface of the sensor body, the at least one sensing element being exposed to inside of the drum so as to make contact with the wet clothes, considered to be

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disclosed in secondary reference Deschaaf for the purpose of more accurately sensing the moisture of clothes being dried within a clothes dryer by contacting the clothes instead of sensing the moisture of the air flowing past the clothes. Chen in view of Deschaaf is considered to disclose the claimed invention, as discussed above, except for the claimed perforated air outlet grill being rigidly secured to the front bulkhead and covering the remaining portion of the air outlet opening. Jelinek, another dryer sensor assembly, is considered to disclose a perforated air outlet grill being rigidly secured to the front bulkhead and covering the remaining portion of the air outlet opening at column 3 lines 25-40. It would have been obvious to one skilled in the art to combine the teachings of Chen in view of Deschaaf with the perforated air outlet grill being rigidly secured to the front bulkhead and covering the remaining portion of the air outlet opening, considered disclosed in Jelinek, for the purpose limiting access to sensor objects but allow unobstructed airflow through a dryer. Furthermore Chen in view of Deschaaf in further view of Jelinek is considered to disclose the claimed invention, as discussed above, under the obviousness rejection, except for the claimed screw holes, detent, caved channel, ridge included groove, and sloping surface. It would have been an obvious matter of design choice to provide the claimed fastening means or adjoining surface shapes for the purpose of securing a moisture sensor to a clothes dryer for a more contoured profile.

### ***Response to Arguments***

Applicant's arguments filed November 26, 2004 have been fully considered but they are not persuasive with respect to claims 1-12. Applicant's arguments with respect

to claims 13-22 have been considered but are moot in view of the new ground of rejection.

Current Office practice allows claims to be reasonably and broadly construed in light of the specification. The location and position of a claimed element is defined based on the language recited in its claim and based on its specification description. In this case, it is argued that the claim recitation including directly to the bulkhead, the sensor body being positioned so as to cover a portion of the air outlet opening is not disclosed in either primary reference Chen or secondary reference Deschaaf. As discussed above, in the obviousness rejection, Chen is considered to disclose a humidity sensor **148** at column 6 lines 16-48 and when viewed with figure 5. The argued and claimed bulkhead is defined as a front or rear portion of a dryer drum i.e. the flat part of a cylinder. The sensor of Chen is mounted on a bulkhead as claimed as see from the disclosure and patented figure. Also disclosed is a screen filter **46** (column 3 line 8) mounted on the bulkhead which is connected to an exhaust duct **50** (column 6 lines 23-34) in which the sensor is mounted in the flow path, as shown by the air flow arrows in figure 5, such that it covers a portion of the air outlet opening, as claimed. To one skilled in the art, to sense a condition of dryer air flow, a sensor must cover a portion of an air outlet opening. Therefore, Chen is considered to disclose the argued claimed feature such the obviousness rejection is considered proper and maintained.

Secondary reference Deschaaf need not disclose the argued feature, since primary reference Chen is considered to disclose the claimed feature.

Finally, applicant argues that Jelinek does not disclose a feature. Jelinek was not cited to obviate the argued feature, since that feature is considered to be disclosed in the primary reference. The obviousness rejections are considered proper and maintained.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus can be reached on 571 272 4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SMG  
December 21, 2004

